

Fort Matanzas National Monument
Monthly Resource Management Update
July 31, 2011

Gopher Tortoise Survey

Fort Matanzas is known for having a healthy population of gopher tortoises (*Gopherus polyphemus*). Although the species is listed as “threatened” by the State of Florida, and is a “candidate species” for listing under the federal Endangered Species Act, the population in the park has always been considered robust. Just how robust, though, was only a guess until recently.

In mid-July park staff, along with a park volunteer, we conducted a formal survey of nine acres of likely gopher tortoise habitat in the park. (This species of tortoise prefers to live in coastal dunes. Dunes contain well-drained, sandy soil; copious low plant growth; and open, sunny areas- ideal conditions for burrowing, feeding, and basking.) The survey utilized a protocol developed by the Florida Fish and Wildlife Conservation Commission (FWC): Three people, sixteen feet apart, walked belt transects through the survey area, keeping note of active tortoise burrows encountered. (As the name implies, active burrows are those not abandoned by tortoises, as indicated by caved-in entrances and vegetation overgrowth.)

The total number of active burrows is divided by the number of acres in the survey. This number is multiplied by a coefficient, resulting in the number of gopher tortoises per acre. The survey at Matanzas produced a result of 5.2 tortoises per acre, which is an outstanding number! (Four per acre is considered extremely high by FWC.) Additional surveys will be conducted to see if this result can be extrapolated to other areas of the park dominated by similar coastal dune habitat.

Native and Invasive-Exotic Wildflowers

With summer comes heat, humidity, and afternoon thunderstorms, but it also brings a kaleidoscope of color to the sand dunes of Fort Matanzas National Monument. Bursts of orange, red, yellow and even our unique pink Indian blanket flowers (*Gaillardia pulchella*) cover the landscape. Tall, slender standing cypress (*Ipomopsis rubra*) are covered in tubular red blooms which are attractive to bees and butterflies. Mingled among the red, orange and pink blanket flowers are bright yellow blooms of dune sunflowers (*Helianthus debilis*) and partridge pea (*Chamaecrista fasciculata*). And in the mornings, beachcombers can enjoy the beauty of the large violet blooms of the railroad vine (*Ipomoea pes-caprae*) and the white flowers of the beach morning glory (*Ipomoea imperati*) that trail through the sand dunes.

However, among the color and beauty of native wildflowers grow intruders that are just as colorful. One intruder that is very common in Florida is lantana (*Lantana camara*). Not to be confused with the endangered native lantana (*Lantana depressa*) that has pale yellow flowers, invasive-exotic lantana can have multicolored blooms in vibrant shades of yellow, red, orange, lavender, pink, and white. Park rangers at Fort Matanzas are continuing efforts to eradicate exotic lantana from the park with a combination of tree shears and the application of an approved herbicide. This herbicide is also being used to safely remove another invasive-exotic plant growing on the walls of the fort known as Chinese ladder brake fern (*Pteris vittata*). With these efforts, park rangers at Fort Matanzas National Monument work to ensure that visitors for years to come can see the splendid colors of native dune wildflowers and a historical fort free of invasive-exotic plants growing from its walls.